Fermilab | U.S. DEPARTMENT OF ENERGY | Office of Science

art news

24 January 2019

art stakeholders meeting

art 2.12 legacy series released

- Internal changes and some configuration options to aid in memory reduction

- `SamplingInput` source, which samples events from different datasets given weights

- **Breaking change:** in order for any *art* plugins to be loaded for an *art* job (e.g. modules, services, etc.), the directory that contains the dynamic library **must** be included on the `CET_PLUGIN_PATH` environment variable.
  - Happens under the covers for all projects using cetbuildtools version 7.04.00 and newer
  - Experiments that do not use cetbuildtools must must explicitly prepend to this variable:

```
setup art v2_12_00 -q +e17:+prof
CET_PLUGIN_PATH=/my/experiment/path/to/plugins:$CET_PLUGIN_PATH
```

art 3.02

- May be able to tag as early as tomorrow
  - Will try to get the `SamplingInput` source merged in; may need to wait until *art* 3.03
  - Memory/CPU improvements from *art* 2.12 will be ported for *art* 3.03

- Primary features
  - Separates *art* and *art_root_io; we* will provide an umbrella product *(critic),* which will set up consistent versions of *art, art_root_io,* and *gallery.*
  - External product refresh (see next page)
  - Supports Python 3 (see next next page)
  - `CET_PLUGIN_PATH` breaking change from *art* 2.12 also applies to *art* 3.02

art 3.02

- Significant external product refresh

Product	*art 3.01*	*art 3.02*
boost	v1_66_0a	v1_69_0
catch*	v1_9_6	v2_5_0
clhep	v2_3_4_6	v2_4_1_0b
cppunit	v1_13_2c	v1_14_0
fftw	v3_3_6_pl2	v3_3_8
gsl	v2_4	v2_5
+ lapack		**v3_8_0c**
mysql_client	v5_5_58a	v5_5_62
+ numpy		**v1_15_4b**

Product	*art 3.01*	*art 3.02*
postgresql	v9_6_6a	v9_6_11b
pythia	v6_4_28k	v6_4_28p
python	v2_7_14b	v2_7_15a, **v3_7_2**†
range	v3_0_3_0	v3_0_4_0
root	v6_12_06a	v6_16_00
sqlite	v3_20_01_00	v3_26_00_00
tbb	v2018_2a	v2019_3
xrootd	v4_8_0b	v4_8_5b

**build-only product*

†not supported on SLF6

Python 3

- Python 2.7 EOL is midnight (00:00) on January 1, 2020

- Begin moving to Python 3 now:
  - In your Python 2.7 code, use `from __future__ import print_function` now
  - Adjust your print statements to be function calls

- To use Python-3 built *art*, use the "py3" qualifier

```
setup art v3_02_00 -q +e19:+prof:+py3
```

- Python 3.7 is not currently supported on SLF6.

- The SciSoft team will not create Python-3 built distributions of *art* 2.